

CLAIMS:

1. A telecommunications cell in a telecommunications network, the cell comprising:

5        a plurality of antennas oriented for subdividing the cell into a plurality of sectors, each sector having two of the antennas positioned therein; and  
10      a base station coupled with the antennas for controlling wireless communication in the cell using selected ones of a defined set of codes for each of the sectors, the base station being configured for dividing the codes between the two antennas in each sector, operating one of the two antennas at a first frequency for handling traffic on the first frequency, and operating the other of the two antennas at a second frequency as a pilot beacon for handing off calls to and from adjacent cells in a soft manner.

15      2. The cell as set forth in claim 1, the antennas being oriented for configuring the site into three corresponding sectors.

3. The cell as set forth in claim 1, the first frequency being about 1931.25 MHZ.

20      4. The cell as set forth in claim 1, the second frequency being about 1933.75 MHZ.

25      5. The cell as set forth in claim 1, the base station being configurable to operate the second frequency for handling traffic or for handing off calls to the first frequency.

6. The cell as set forth in claim 1, wherein the pilot beacon provides no traffic channels.

30      7. The cell as set forth in claim 1, wherein the pilot beacon provides pilot, paging, and synchronization channels.

8. The cell as set forth in claim 1, wherein the telecommunications network is a CDMA telecommunications network.

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9. A method of operating a cell having an antenna site in a PCS telecommunications network, the method comprising the steps of:

- (a) transmitting and receiving telecommunications at the antenna site by way of a plurality of antennas configuring the site into a plurality of sectors, each of the sectors including two antennas;
- (b) using a single base station unit coupled with the antennas for controlling the transmitting and receiving over one of the two antennas in each sector over a first frequency using selected ones of a defined set of codes; and
- (c) using the base station unit as a pilot beacon over a second frequency using selected ones of a defined set of codes for handing off calls between adjacent cells in a soft manner.

10 10. The method as set forth in claim 9, step (b) including the step of using 1931.25 MHZ as the first frequency.

15 11. The method as set forth in claim 9, step (b) including the step of using 1933.75 MHZ as the second frequency.

20 12. The method as set forth in claim 9, step (a) including the step of using three antennas oriented for configuring the site into three sectors.

25 13. The method as set forth in claim 9, the base station being configurable to operate the second frequency for handling traffic or for handing off calls to the first frequency.

26 14. The method as set forth in claim 9, wherein the pilot beacon provides no traffic channels.

30 15. The method as set forth in claim 9, wherein the pilot beacon provides pilot, paging, and synchronization channels.

16. The method as set forth in claim 9, wherein the telecommunications network is a CDMA telecommunications network.

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17. A telecommunications cell in a telecommunications network, the cell comprising:

a single base station; and  
six antennas coupled with the base station and oriented for configuring the cell  
5 into three sectors, with each sector having two of the antennas;  
the base station being operable for controlling transmission and reception of wireless communication in the cell by dividing a defined set of codes between each of the two antennas in each sector so that a first antenna in each sector transmits at a first frequency for handling traffic on the first  
10 frequency and a second antenna in each sector transmits at a second frequency for handing off calls between adjacent cells.

18. The cell as set forth in claim 17, the first frequency being about 1931.25  
MHZ.

15 19. The cell as set forth in claim 17, the second frequency being about 1933.75  
MHZ.

20 20. The cell as set forth in claim 17, the base station being configurable to operate the second frequency for handling traffic or for handing off calls to the first frequency.

25 21. The cell as set forth in claim 17, the base station being configured for operating the second antenna at the second frequency as a pilot beacon for handing off calls to and from cells adjacent to the cell in a soft manner.

30 22. The cell as set forth in claim 21, wherein the pilot beacon provides no traffic channels.

23. The cell as set forth in claim 17, wherein the pilot beacon provides pilot, paging, and synchronization channels.

24. The cell as set forth in claim 17, wherein the telecommunications network is a CDMA telecommunications network.